We've finished the March 21, 2017 Bulletin 120 (B120) forecast update. The forecasts include observed conditions through the morning of March 21, 2017.

The forecasts are posted at:

B120: http://cdec.water.ca.gov/cgi-progs/iodir?s=b120up

Forecast Summary:

All forecasts dropped since last week. The projected median April-July (AJ) runoff in the major Sierra river basins ranges from 126 percent for the Inflow to Lake Shasta and Sacramento River at Bend to 247 percent on the Kern River. The forecasts for the Sacramento region decreased 8 percent of average compared to the March 14 forecast. The San Joaquin and Tulare regions decreased by 7 and 10 percent of average compared to the March 14 forecast, respectively. The Yuba River had the smallest drop (1 percent) of all forecasts since last week, whereas the Tule R had the greatest drop (16 percent).

Runoff:

All rivers are flowing above or near 150 percent of average except the Lake Shasta Total Inflow, Sacramento at Bend Bridge, Feather, and Yuba rivers. The Yuba River is flowing at the lowest rate: 90 percent of average. The San Joaquin, Kaweah, Tule, and Kern rivers are still flowing at the greatest rates. Last week they flowed above 175 percent of average for the month to date and now they are all flowing above 200 percent. These above average flow rates are due to melting snow which decreases the April-July volume forecasts.

Precipitation:

Precipitation for the 2016-2017 water year has accumulated at the rates of average shown in the table below. Accumulated precipitation remains above the record 1982-83 levels for the 8-Station and 5-Station indices.

Region/Index	WY-to-date precipitation (%) through March 23, 2017	Month-to-date precipitation (% of month total) through March 23, 2017
Northern Sierra 8-Station Index	**203 (81.1 inches)**	**65 (4.5 inches)**
San Joaquin 5-Station Index	**198 (63.4 inches)**	**45 (2.8 inches)**
Tulare Basin 6-Station Index	**185 (42.7 inches)**	**36 (1.7 inches)**

Snowpack:

The snowpack as of the morning of March 23, 2017 stands at the following (based on snow sensors):

Region	Snow Water Equivalent (inches)	% of Average (Apr 1)	% of Average (Mar 23)
Northern	**39.0**	**141**	**141**
Central	**48.6**	**168**	**170**
Southern	**43.6**	**163**	**165**
Statewide	**44.4**	**159**	**160**

Weather and Climate Outlooks:

The latest forecasts indicate up to 3.0, 2.5, and 1.0 inches of precipitation for the Sacramento, San Joaquin, Tulare River Regions, respectfully, accumulated for the 6 day period. Up to 4.0 and 2.0 inches are forecasted for the North Coast and Eastside for this entire period. The heaviest day is Friday (Day 2)

and the lightest days are Saturday (Day 3) and Tuesday (Day 6). Projected freezing levels for the North Coast and Sacramento River Region will fluctuate between 5,000 and 6,000 feet for the first 5 days and rise up to 10,000 feet for the last day. The San Joaquin and Tulare River regions freezing levels will fluctuate between 7,000 and 9,000 feet for the first 5 days and rise up to 11,000 feet for the last day. The Eastside projected freezing levels will fluctuate between 6,000 and 8,000 feet for the period.

The NWS Climate Prediction Center (CPC) one-month outlook for April, issued March 16, indicates increased chances of below normal precipitation for the northwestern portion of the state and equal chances of above or below normal precipitation elsewhere. The same outlook predicts equal chances of above or below normal temperatures for all areas except for the Colorado River Region where above normal temperatures are expected.

The CPC three-month (April-May-June) outlook, issued March 16, indicates equal chances of above or below normal precipitation for all of the state. The same outlook predicts equal chances of above or below normal temperatures for the state except for the far southeastern area and the Colorado River basin where above normal temperatures are expected.

ENSO-neutral conditions are present. Equatorial sea surface temperatures (SSTs) are near average across the central and east-central Pacific. They are above average in the eastern Pacific Ocean. ENSO-neutral conditions are favored to continue through at least the Northern Hemisphere spring 2017, with increasing chances for El Niño development into the fall.

Next Update:

A Bulletin 120 update for conditions as of March 28 will be available Thursday, March 30. If you have any questions regarding this forecast, please contact a member of the Snow Surveys staff.